CLAIMS

What is claimed is:

1   1.   A method for processing XML requests on a router, the method comprising the

2   machine-implemented steps of:

3   receiving, at a router from a client, an XML request to perform an operation on

4   management data maintained in a database by the router;

5   parsing the XML request to identify one or more XML elements contained in the

6   XML request;

7   generating one or more data requests based upon the one or more XML elements

8   contained in the XML request; and

9   processing the one or more data requests against the management data maintained in

10   the database by the router.

1   2.   The method as recited in Claim 1, wherein the step of parsing the XML request to

2   identify one or more XML elements contained in the XML request includes

3   identifying one or more XML tags contained in the XML request and the step of

4   generating the one or more data requests based upon the one or more XML elements

5   contained in the XML request includes generating the one or more data requests based

6   upon the one or more XML tags contained in the XML request.

1   3.   The method as recited in Claim 1, further comprising the machine-implemented step

2   of generating an XML response based upon processing the one or more data requests

3 against the management data maintained in the database by the router.

1 4. A method for processing XML requests on a router, the method comprising the

2   machine-implemented steps of:

3   receiving, at a router from a client, an XML request to perform an operation on

4   management data maintained in a database by the router;

5   parsing the XML request to identify one or more XML tags contained in the XML

6   request;

7   identifying one or more management data items in the management data that are

8   associated with the one or more XML tags;

9   generating one or more operations to be performed on the one or more management

10   data items;

11   processing the one or more operations against the one or more management data items

12   maintained in the database; and

13   generating and XML response and sending the XML response to the client.

1 5. A method for generating schema data used by a router to process XML requests, the

2   method comprising the machine-implemented steps of:

3   receiving schema definition data that defines both a hierarchical data model used by

4   the router and an XML interface used by client to generate XML requests for

5   the router;

6   processing the schema definition data to generate processed schema definition data;

7   and

8   storing the processed schema definition data on the router.

1   6.   A machine-readable medium for processing XML requests on a router, the machine-

2   readable medium carrying instructions which, when executed by one or more

3   processors, cause the one or more processors to perform the steps of:

4   receiving, at a router from a client, an XML request to perform an operation on

5   management data maintained in a database by the router;

6   parsing the XML request to identify one or more XML elements contained in the

7   XML request;

8   generating one or more data requests based upon the one or more XML elements

9   contained in the XML request; and

10   processing the one or more data requests against the management data maintained in

11   the database by the router.

1   7.   The machine-readable medium as recited in Claim 6, wherein the step of parsing the

2   XML request to identify one or more XML elements contained in the XML request

3   includes identifying one or more XML tags contained in the XML request and the

4   step of generating the one or more data requests based upon the one or more XML

5   elements contained in the XML request includes generating the one or more data

6   requests based upon the one or more XML tags contained in the XML request.

1   8.   The machine-readable medium as recited in Claim 6, further comprising one or more

2   additional instructions which, when executed by the one or more processors, cause the

3   one or more processors to perform the step of generating an XML response based

4   upon processing the one or more data requests against the management data

5   maintained in the database by the router.

1   9.   A machine readable medium for processing XML requests on a router, the machine-

2   readable medium carrying instructions which, when executed by one or more

3   processors, cause the one or more processors to perform the steps of:

4   receiving, at a router from a client, an XML request to perform an operation on

5   management data maintained in a database by the router;

6   parsing the XML request to identify one or more XML tags contained in the XML

7   request;

8   identifying one or more management data items in the management data that are

9   associated with the one or more XML tags;

10   generating one or more operations to be performed on the one or more management

11   data items;

12   processing the one or more operations against the one or more management data items

13   maintained in the database; and

14   generating and XML response and sending the XML response to the client.

1   10.   A machine-readable medium for generating schema data used by a router to process

2   XML requests, the machine-readable medium carrying instructions which, when

3   executed by one or more processors, cause the one or more processors to perform the

4   steps of:

5		receiving schema definition data that defines both a hierarchical data model used by
6		the router and an XML interface used by client to generate XML requests for
7		the router;
8		processing the schema definition data to generate processed schema definition data;
9		and
10		storing the processed schema definition data on the router.

1	11.	An apparatus for processing XML requests on a router, the apparatus comprising a
2		memory storing instructions which, when executed by one or more processors, cause
3		the one or more processors to perform the steps of:
4		receiving, at a router from a client, an XML request to perform an operation on
5		management data maintained in a database by the router;
6		parsing the XML request to identify one or more XML elements contained in the
7		XML request;
8		generating one or more data requests based upon the one or more XML elements
9		contained in the XML request; and
10		processing the one or more data requests against the management data maintained in
11		the database by the router.

1	12.	The apparatus as recited in Claim 11, wherein the step of parsing the XML request to
2		identify one or more XML elements contained in the XML request includes
3		identifying one or more XML tags contained in the XML request and the step of
4		generating the one or more data requests based upon the one or more XML elements

5 contained in the XML request includes generating the one or more data requests based

6 upon the one or more XML tags contained in the XML request.

1 13. The apparatus as recited in Claim 11, wherein the memory further comprises one or

2 more additional instructions which, when executed by the one or more processors,

3 cause the one or more processors to perform the step of generating an XML response

4 based upon processing the one or more data requests against the management data

5 maintained in the database by the router.

1 14. An apparatus for processing XML requests on a router, the apparatus comprising a

2 memory carrying instructions which, when executed by one or more processors, cause

3 the one or more processors to perform the steps of:

4 receiving, at a router from a client, an XML request to perform an operation on

5 management data maintained in a database by the router;

6 parsing the XML request to identify one or more XML tags contained in the XML

7 request;

8 identifying one or more management data items in the management data that are

9 associated with the one or more XML tags;

10 generating one or more operations to be performed on the one or more management

11 data items;

12 processing the one or more operations against the one or more management data items

13 maintained in the database; and

14 generating and XML response and sending the XML response to the client.

1   15.   An apparatus for generating schema data used by a router to process XML requests,

2   the apparatus comprising a memory storing instructions which, when executed by one

3   or more processors, cause the one or more processors to perform the steps of:

4   receiving schema definition data that defines both a hierarchical data model used by

5   the router and an XML interface used by client to generate XML requests for

6   the router;

7   processing the schema definition data to generate processed schema definition data;

8   and

9   storing the processed schema definition data on the router.

1   16.   An apparatus for processing XML requests on a router, the apparatus comprising:

2   means for receiving, at a router from a client, an XML request to perform an

3   operation on management data maintained in a database by the router;

4   means for parsing the XML request to identify one or more XML elements contained

5   in the XML request;

6   means for generating one or more data requests based upon the one or more XML

7   elements contained in the XML request; and

8   means for processing the one or more data requests against the management data

9   maintained in the database by the router.

1   17.   The apparatus as recited in Claim 16, further comprising means for identifying one or

2   more XML tags contained in the XML request and means for generating the one or

3   more data requests based upon the one or more XML tags contained in the XML

4   request.

1   18.   The apparatus as recited in Claim 16, further comprising means for generating an

2   XML response based upon processing the one or more data requests against the

3   management data maintained in the database by the router.

1   19.   An apparatus for processing XML requests on a router, the apparatus comprising:

2   means for receiving, at a router from a client, an XML request to perform an

3   operation on management data maintained in a database by the router;

4   means for parsing the XML request to identify one or more XML tags contained in

5   the XML request;

6   means for identifying one or more management data items in the management data

7   that are associated with the one or more XML tags;

8   means for generating one or more operations to be performed on the one or more

9   management data items;

10   means for processing the one or more operations against the one or more management

11   data items maintained in the database; and

12   means for generating and XML response and sending the XML response to the client.

1   20.   An apparatus for generating schema data used by a router to process XML requests,

2   the apparatus comprising:

3   means for receiving schema definition data that defines both a hierarchical data model

4   used by the router and an XML interface used by client to generate XML

5   requests for the router;

6   means for processing the schema definition data to generate processed schema

7   definition data; and

8   means for storing the processed schema definition data on the router.